Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 to 10. (Canceled).

11. (Currently Amended) A simulation system for computer-implemented simulation and verification of a control system under development, the control system comprising a target hardware and application software running on the target hardware, the simulation system comprising:

hardware implementing a generic model animation interface passing data from the target hardware to a modeling tool for animating a model of the control system and an in-model calibration interface passing data from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture, to communicate with a standard measurement and calibration interface on the target hardware thereby forming a link between the application software on the target hardware and a host of the host-target architecture.

12. (Previously Presented) The system according to claim 11, further comprising a target server adapted to connect the modeling tool with the target hardware.

13. (Previously Presented) The system according to claim 12, wherein the target server includes a protocol driver of a communication protocol adapted for communication with the target.

14. (Previously Presented) The system according to claim 11, further comprising a plurality of simulation processes with corresponding memory and interface modules, the modules including distinct memory locations adapted for inter-module communication.

15. (Previously Presented) The system according to claim 14, wherein simulation is performed by execution of a control system simulation model, the simulation model including a plurality of sub-models each being performed on one of the plurality of modules respectively.

16. (Previously Presented) The system according to claim 14, wherein at least some of the modules are dynamically reconfigurable for communication via distinct memory locations.

17. (Currently Amended) A host of a simulation system for computer-implemented simulation and verification of a control system under development, the control system comprising a target hardware and application software running on the target hardware, the host comprising:

hardware implementing ~~implmenting~~ a generic model animation interface passing data from the target hardware to a modeling tool for animating a model of the control system and an in-model calibration interface passing data from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture, to communicate with a standard measurement and calibration interface on the target hardware forming a link between the application software on the target hardware and a host of the host-target architecture, the host including at least one respective modeling tool and a target server adapted to connect the modeling tool with the target hardware.

18. (Currently Amended) A method, comprising:

simulating and verifying a control system under development, the control system comprising a target hardware and application software running on the target hardware, the simulating and verifying performed by a simulation system including a generic model animation interface passing data from the target hardware to a modeling tool for animating a model of the control system and an in-model calibration interface passing data from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture, to communicate with a standard measurement and calibration interface on the target hardware forming a link between the application software on the target hardware and a host of the host-target architecture, the host including at least one respective modeling tool and a target server adapted to connect the modeling tool with the target hardware.

19. (Currently Amended) A computer-readable storage medium including a set of instructions executable by a processor, the set of instructions, when executed, causing the processor to perform a method of simulating and verifying a control system under development, the method comprising:

simulating and verifying a control system under development by a simulation system; wherein:

the control system comprises a target hardware and application software running on the target hardware; and

the simulation system includes a generic model animation interface passing data during the simulating and verifying from the target hardware to a modeling tool for animating a model of the control system and an in-model calibration interface passing data during the simulating and verifying from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture, to communicate with a standard measurement and calibration interface on the target hardware forming a link between the application software on the target hardware and a host of the host-target architecture, the host including at least one respective modeling tool and a target server adapted to connect the modeling tool with the target hardware.